

Appendix A

New Site Identification Forms

CONTENTS

ACRONYMS	A-v
A-1. INTRODUCTION	A-1
A-1.1 BORAX-09—BORAX II-V Reactor Building (AEF-601).....	A-1
A-1.2 OU 10-06 Radionuclide-Contaminated Soil Areas	A-1
A-1.3 OU 10-07 U.S. West Buried Telecommunications Cable	A-5
A-1.4 Security Training Facility Sumps and Pits (STF-01)	A-5
A-1.5 STF Gun Range Berm (STF-02).....	A-6

FIGURES

A-1. Location of INEEL facilities and new sites not included in CERCLA	A-2
--	-----

TABLES

A-1. New sites not added to the FFA/CO	A-3
--	-----

ACRONYMS

ANL-W	Argonne National Laboratory–West
ANP	Aircraft Nuclear Propulsion
BORAX	Boiling Water Reactor Experiment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFA	Central Facilities Area
D&D	decontamination and dismantlement
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
EBR	Experimental Breeder Reactor
EOCR	Experimental Organic Cooled Reactor
EPA	U.S. Environmental Protection Agency
FFA/CO	Federal Facility Agreement and Consent Order
FY	fiscal year
INTEC	Idaho Nuclear Technology and Engineering Center
INEEL	Idaho National Engineering and Environmental Laboratory
NRF	Naval Reactors Facility
NSA	North Storage Area
NSIF	New Site Identification Form
NTCRA	nontime-critical removal action
OU	operable unit
PBF	Power Burst Facility
RCRA	Resource Conservation and Recovery Act
RI/FS	remedial investigation/feasibility study
RWMC	Radioactive Waste Management Complex

SMC	Specific Manufacturing Capability
STF	Security Training Facility
TAN	Test Area North
TRA	Test Reactor Area
TREAT	Transient Reactor Test Facility
TSF	Technical Support Facility
WAG	waste area group

Appendix A

New Site Identification Forms

A-1. INTRODUCTION

Since the *Federal Facility Agreement and Consent Order* (FFA/CO) was signed in December 1989, several new sites have been identified for evaluation under the *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA). When a new site is identified, a New Site Identification Form (NSIF) is completed and a recommendation is made on whether or not the site will be included in the CERCLA process.

All NSIFs submitted to Waste Area Groups (WAGs) 6 and 10 can be found in the WAG 10 project files or the information repository and have been divided into two categories:

1. New sites included in WAGs 6 and 10
2. New sites not included in the CERCLA process (not WAGs 6 or 10, or any other WAG).

Figure A-1 maps the new sites not included in the CERCLA process and Table A-1 lists all potential release sites that have been identified to date.

The newly-identified sites described below that have been added to the FFA/CO will support the Operable Unit (OU) 10-04 remedial investigation/feasibility study (RI/FS) scope within the Idaho National Engineering and Environmental Laboratory (INEEL) boundary. A description is also found in Appendix B of the OU 10-04 work plan.

A-1.1 BORAX-09—BORAX II-V Reactor Building (AEF-601)

The Boiling Water Reactor Experiment (BORAX) facility was the site of reactor experiments conducted between 1953 and 1964. A decontamination and dismantlement (D&D) removal/containment action was conducted at BORAX-09 in 1996 to remove Resource Conservation and Recovery Act (RCRA) hazardous materials and to leave the site in a safe and stable condition until a final assessment could be made in the OU 10-04 RI/FS. Consensus was reached in August 1996 between the U.S. Department of Energy (DOE), U.S. Environmental Protection Agency (EPA), and the State of Idaho Department of Health and Welfare for D&D to perform a removal/containment action. The BORAX V reactor basement, including asbestos-contaminated material, was backfilled with clean and radionuclide-contaminated soils and left in place with a temporary cover to minimize intrusion of and exposure to potential receptors. This site will be evaluated in the OU 10-04 RI/FS for cumulative risk.

A-1.2 OU 10-06 Radionuclide-Contaminated Soil Areas

The contaminated soil areas consists of areas of windblown contamination, and other INEEL OUs containing nonwindblown radionuclide-contaminated soils. The sites under investigation include the Technical Services Facility (TSF) Windblown Area, Test Area North (TAN) TSF-06, TAN TSF-26,

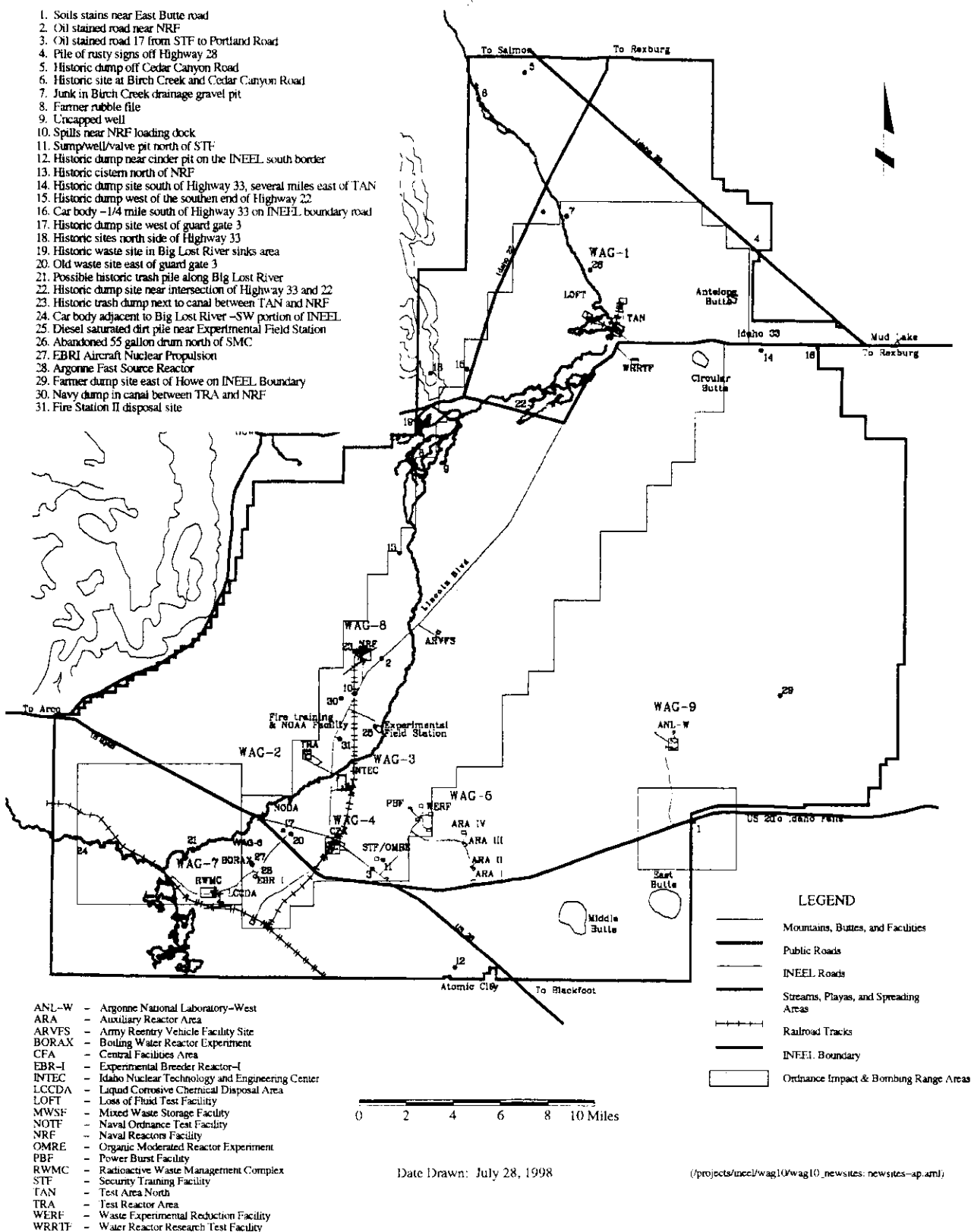


Figure A-1. Location of INEEL facilities and new sites not included in CERCLA.

Table A-1. New sites not added to the FFA/CO.

	Sites Not Recommended for Inclusion to FFA/CO	Date Initiated	Recommended Date	Basis	Reference
1.	Soil stains near East Butte Road	10-17-94	10-21-94	Field Screen indicates no PCBs present	KLF-20-94 10-21-94 Attachments
2.	Oil-stained road near NRF	10-17-94	10-21-94	Field Screen indicates no PCBs present	KLF-20-94 10-21-94 Attachments
3.	Oil-stained road 17 from Safety Training Facility (STF) to Portland Road	10-17-94	10-21-94	Does not meet waste criteria	KLF-20-94 10-21-94 Attachments
4.	Pile of rusty signs off Highway 28	10-17-94	10-21-94	Removal- maintenance action	KLF-20-94 10-21-94 Attachments
5.	Historic dump off Cedar Canyon Road	10-17-94	10-21-94	Archeological/ maint. Action	KLF-20-94 10-21-94 Attachments
6.	Historic site at Birch Creek and Cedar Canyon Road	10-17-94	10-21-94	Archeological/ maint. Action	KLF-20-94 10-21-94 Attachments
7.	Junk in Birch Creek drainage gravel pit	10-17-94	10-21-94	Archeological/ maint. Action	KLF-20-94 10-21-94 Attachments
8.	Farmer rubble pile	10-17-94	10-21-94	Archeological/ maint. Action	KLF-20-94 10-21-94 Attachments
9.	Uncapped well	10-17-94	10-21-94	Cap/identify well	KLF-20-94 10-21-94 Attachments
10.	Spills near NRF loading dock	10-17-94	10-21-94	Does not meet waste criteria	KLF-20-94 10-21-94 Attachments
11.	Sump/well/valve pit north of STF	10-17-94	10-21-94	Repair/cover	KLF-20-94 10-21-94 Attachments
12.	Historic dump near cinder pit on the INEEL southern border	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
13.	Historic cistern north of the Naval Reactor Facility (NRF)	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
14.	Historic dump site south of Highway 33 several miles east of TAN	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments

Table A-1. (continued).

	Sites Not Recommended for Inclusion to FFA/CO	Date Initiated	Recommended Date	Basis	Reference
15.	Historic dump west of the southern end of Highway 22	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
16.	Car body ~1/4 mile south of Highway 33 on INEEL boundary road	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
17.	Historic dump site west of Guard Gate 3	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
18.	Historic sites-north side of Highway 33 (west entrance)	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
19.	Historic waste site in the Big Lost River Sinks Area	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
20.	Old waste site east of Gate 3 (B-21-606)	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
21.	Possible historic trash pile along Big Lost River	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
22.	Historic dump site near intersection of Highway 22 and 33	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
23.	Historic trash dump next to canal between TRA and NRF (actually approximately 1 mile west of NRF)	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
24.	Car body adjacent to Big Lost River—southwest portion of the INEEL	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
25.	Diesel-saturated dirt pile near Experimental Field Station	08-29-94	09-06-94	RCRA waste cleanup action	ARB-332-94 09-06-94 Attachments
26.	Abandoned 55-gallon drum north of State Mobilization Site (SMC)	08-29-94	09-06-94	Removal action	ARB-332-94 09-06-94 Attachments
27.	EBR-I Aircraft Nuclear Propulsion (ANP) nuclear jet engines	01-07-98	01-15-98	Does not meet waste criteria	KLF-03-98 01-15-98 Attachments
28.	Argonne Fast Source Reactor	03-24-94	04-10-94	Does not meet waste criteria	E-mail from S. M. Burns to D. M. Nicklaus

Table A-1. (continued).

	Sites Not Recommended for Inclusion to FFA/CO	Date Initiated	Recommended Date	Basis	Reference
29.	Farmer dump site east of Howe on INEEL Boundary	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
30.	Navy dump in canal between TRA and NRF	08-29-94	09-06-94	Does not meet waste criteria	ARB-332-94 09-06-94 Attachments
31.	Fire Station II disposal site	06-05-97	06-11-97	DOE recommends handling under their FFA/CO tracking	KLF-118 07 06-11-97 Attachments

TAN TSF-29; Test Reactor Area (TRA) Windblown Area, TRA North Storage Area (NSA); Idaho Nuclear Technology and Engineering Center (INTEC) Windblown Area; Central Facilities Area (CFA) Windblown Area; Power Burst Facility (PBF) Windblown Area; Experimental Breeder Reactor (EBR)-I Windblown Area; EBR-15 Radionuclide-Contaminated Soil Area; BORAX Windblown Area; BORAX-08 Ditch; BORAX II-V Leach Pond (BORAX-01); Radioactive Waste Management Complex (RWMC) Windblown Area, Argonne National Laboratory-West (ANL-W) and Transient Reactor Test Facility (TREAT) Windblown Area; and ANL-W Stockpile.

An OU 10-06 nontime-critical removal action (NTCRA) was initiated in fiscal year (FY)-95 at seven selected sites for soil removal. These sites include TSF-06, TSF-26, TSF-29, EBR-15, ANL-W Stockpile, TRA NSA, and BORAX-08 Ditch. The EBR-15 Radionuclide-Contaminated Soil Area, and the BORAX-08 Ditch will be evaluated as a final action in the OU 10-04 RI/FS. The other NTCRA sites will be evaluated as final actions in the WAG-specific comprehensive RI/FSs.

A-1.3 OU 10-07 U.S. West Buried Telecommunications Cable

The U.S. West buried telecommunications cable was installed in the early 1950s. The cable measures 58.7 km (36.5 mi) in length and is buried approximately 0.94 m (100 yds) east of Lincoln Boulevard on the INEEL. The cable originates at the CFA and extends along Lincoln Boulevard to the INTEC, TRA, the Naval Reactors Facility (NRF), and TAN. The cable was cut and rendered useless in the spring of 1990 when U.S. West installed a new fiber optic replacement cable. Soil samples collected during November 1990 indicated that no risk to human health or the environment was present. A Track 1 investigation recommended that OU 10-07 be classified as a No Further Action CERCLA site in the administrative record. The OU 10-07 U.S. West telecommunication cable will not be further evaluated in the OU 10-04 RI/FS for human health, but is retained for ecological evaluation.

A-1.4 Security Training Facility Sumps and Pits (STF-01)

The Security Training Facility (STF) (formerly the Experimental Organic Cooled Reactor [EOCR]) building STF-601 is near the main INEEL entrance a half-mile east on Jefferson Boulevard. The STF-601 building has been used intermittently since 1963 (when the EOCR project was canceled) for material storage, security force practice maneuvers, and occasional destructive testing of reactor

components or hazardous materials. Because the EOCR project was terminated before starting the reactor, no radioactive contamination of parts and systems occurred. In 1997, D&D discovered the flooded sumps and pits when opening an area of the basement that had been sealed since approximately 1984. The site was subsequently approved by U.S. Department of Energy Idaho Operations Office (DOE-ID) for addition to OU 10-04 via the new site identification process. Stained water-paths from the ceiling indicate that the water flowed over the crumbling asbestos plastered walls and the piping. The flooded sumps and pits appear to contain loose asbestos. Water levels fluctuate in the sumps and pits as evident from high water marks on the walls. Preliminary surveys indicate that there is no radiological contamination. Sampling of the sumps and pits will be conducted during FY-98 by D&D as described in the Field Sampling Plan in Appendix G of the Work Plan. The D&D data from STF-01 will be retained for evaluation in the OU 10-04 RI/FS.

A-1.5 STF Gun Range Berm (STF-02)

The STF area has been used since 1983 for security force practice maneuvers including small arms target practice in a berm approximately 76 m (250 ft) northeast of STF-601. The berm was used from approximately 1983 to the time of a shooting accident in 1990. Approximately 5 million rounds were fired into the berm, including tracer rounds. Some rounds are expected to have scattered in surrounding surface soil areas. Gun-cleaning solvents may have been used in the area. No radiological contamination is anticipated. DOE-ID approved the NSIF to add the Gun Range berm and surrounding soils in the OU 10-04 as site STF-02. Sampling of the Gun Range berm and surrounding soils will be conducted during FY-99 and the data will be retained for evaluation in the OU 10-04 RI/FS.

Appendix B

Human Health Screening and Data Gap Analysis Report

CONTENTS

B-1. IDENTIFICATION OF SITES TO BE EVALUATED	B-1
B-2. SUMMARY OF INFORMATION ON WAGs 6 AND 10 RELEASE SITES	B-2
B-2.1 WAG 6 Sites	B-2
B-2.1.1 No Operable Unit.....	B-2
B-2.1.2 OU 6-01	B-3
B-2.1.3 OU 6-02	B-4
B-2.1.4 OU 6-03	B-7
B-2.1.5 OU 6-04	B-12
B-2.1.6 OU 6-05	B-13
B-2.2 WAG 10 Sites	B-13
B-2.2.1 No Operable Unit.....	B-13
B-2.2.2 OU 10-01	B-16
B-2.2.3 OU 10-02	B-16
B-2.2.4 OU 10-03	B-17
B-2.2.5 OU 10-04	B-17
B-2.2.6 OU 10-05	B-18
B-2.2.7 OU 10-06	B-18
B-2.2.8 OU 10-07	B-19
B-3. SUMMARY OF RETAINED SITES AND IDENTIFIED DATA GAPS	B-19
B-4. REFERENCES	B-19

Acronyms

AEF	Argonne Experimental Facility
ANL	Argonne National Laboratory
ANL-W	Argonne National Laboratory-West
ARAR	applicable or relevant and appropriate requirement
ARVFS	Army Reentry Vehicle Facility Site
BORAX	Boiling Water Reactor Experiment
BTEX	benzene, toluene, ethylbenzene, and xylene
CFA	Central Facilities Area
CLP	contact laboratory program
COCA	Consent Order and Compliance Agreement
D&D	decontamination and dismantlement
DEQ	Division of Environmental Quality
DF	Dairy Farm
DOD	Department of Defense
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
EBR	Experimental Breeder Reactor
EFS	Experimental Field Station
EOCR	Experimental Organic-Cooled Reactor
EP	extraction procedure
EPA	U.S. Environmental Protection Agency
FFA/CO	Federal Facility Agreement and Consent Order
FS	feasibility study
FSP	field sampling plan

FY	fiscal year
HI	hazard index
IDHW	Idaho Department of Health and Welfare
IDL	instrument detection limit
IH	industrial hygiene
INEEL	Idaho National Engineering and Environmental Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
LCCDA	Liquid Corrosive Chemical Disposal Area
MTR	Materials Test Reactor
NaI	sodium iodide
NaK	sodium potassium
NCP	National Contingency Plan
NOAA	National Oceanographic and Atmospheric Administration
NODA	Naval Ordnance Disposal Area
NRF	Naval Reactors Facility
NSA	North Storage Area
NSIF	New Site Identification Form
NTCRA	nontime-critical removal action
OMRE	Organic Moderated Reactor Experiment
OU	operable unit
PBF	Power Burst Facility
PCB	polychlorinated biphenyl
PID	photoionization detector
PRG	preliminary remediation goal
RCRA	Resource Conservation and Recovery Act

RDX	cyclotrimethylene trinitroamine
RI	remedial investigation
RI/FS	remedial investigation/feasibility study
RML	Radiation Measurements Laboratory
ROD	Record of Decision
RWMC	Radioactive Waste Management Complex
SRPA	Snake River Plain Aquifer
STF	Security Training Facility
SVOC	semivolatile organic compound
TAN	Test Area North
TBBR	Twin Buttes Bombing Range
TCA	trichloroethane
TCLP	toxicity characteristic leaching procedure
TMP	tank management program
TNT	trinitrotoluene
TPH	total petroleum hydrocarbon
TRA	Test Reactor Area
TREAT	Transient Reactor Test Facility
TSF	Technical Support Facility
UST	underground storage tank
VOC	volatile organic compound
WAG	waste area group
WERF	Waste Experimental Reduction Facility

WMO	Waste Management Operations
WWP	Warm Waste Pond
ZPPR	Zero Power Physics Reactor

Appendix B

Human Health Screening and Data Gap Analysis Report

B-1. IDENTIFICATION OF SITES TO BE EVALUATED

The purpose and logic for screening the release sites within Waste Area Groups (WAGs) 6 and 10 are twofold: first, to identify and retain those sites for evaluation (in the Operable Unit [OU] 10-04 comprehensive remedial investigation/feasibility study [RI/FS]) that have known contamination potentially above risk-based levels; and second, to identify known or potential data gaps associated with release sites.

Sites within WAGs 6 and 10 were screened in accordance with the following steps to identify sites that may adversely affect human health:

1. Information was compiled for WAGs 6 and 10 sites.
2. New sites, unevaluated sites, and removal-action sites were identified.
3. No Action sites and nonsource sites were eliminated.
4. Sites with no detected contamination were eliminated.
5. Sites previously determined (through Track 1, Track 2, or other investigations) to have risk less than $1E-07$ and a hazard index (HI) less than 0.1 were eliminated.
6. If not eliminated by the above steps, sites were retained in the OU 10-04 RI/FS for further evaluation against the contaminant screening criteria.

Data gaps were identified by evaluating the existing data for each release site and determining what additional data were necessary to meet the following objectives:

- Complete characterization of WAGs 6 and 10
- Develop a better conceptual understanding of WAGs 6 and 10 cumulative and comprehensive risks
- Better define applicable or relevant and appropriate requirements (ARARs)
- Identify and screen remedial alternatives.

A data gap does not necessarily require additional sampling of a particular site. It may involve collecting additional historic or process knowledge, or extrapolating analytical data from a similar site.

Track 1, Track 2, and other investigation documents were reviewed for each OU before data gaps were identified. If the available documentation for a given release site indicated that one or more of the following criteria were met, then a data gap was identified for that site:

- Specific media were not evaluated in the site's Track 1 or Track 2 investigation
- Insufficient data existed to characterize the nature and extent of contamination
- Insufficient data existed to conduct a risk evaluation
- Risk at the site was previously unevaluated.

Sites with known contamination and sites exhibiting data gaps were identified for the OU 10-04 RI/FS. The following subsections summarize all the release sites within WAGs 6 and 10 and the potential data gaps.

B-2. SUMMARY OF INFORMATION ON WAGS 6 AND 10 RELEASE SITES

In the *Federal Facility Agreement/Consent Order* (FFA/CO) with the Idaho National Engineering and Environmental Laboratory (INEEL) (DOE-ID 1991), WAGs 6 and 10 are divided into five and nine OUs, respectively. These OUs are further divided into release sites (also referred to as subunits). Information and data for these release sites provide the input for the site screening and data gap analysis. Table 1-1 of the Work Plan for WAGs 6 and 10 OU 10-04 Comprehensive RI/FS (hereafter referred to as the Work Plan) provides a summary of the description of each release site within OU 10-04, the type of investigation conducted for each site, and; if the site were eliminated from further evaluation, the reason for elimination. In the following OU summaries, each release site is discussed in terms of operational history, data availability, and known or suspected contamination. The summaries also identifies the sites that have been retained for further evaluation in the OU 10-04 RI/FS and the sites for which data gaps have been identified.

B-2.1 WAG 6 Sites

B-2.1.1 No Operable Unit

The release sites discussed below were not assigned to an OU in the FFA/CO (DOE-ID 1991).

B-2.1.1.1 EBR-02: EBR-1 Septic Tank (AEF-702) and Seepage Pit (AEF-703). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The Experimental Breeder Reactor (EBR)-02 site consists of the EBR-1 Septic Tank (Argonne Experimental Facility [AEF]-702) and Seepage Pit (AEF-703). The septic system is located north of the Waste Management building (AEF-603) within the EBR-1 facility. The septic tank and its associated seepage pit are used to treat sanitary waste discharges from the Waste Management building (AEF-603). The building was constructed in 1952, and it is assumed that the septic system was built at the same time. The building was formerly Argonne National Laboratory (ANL)-716 and is now used only intermittently for historical displays. Assessment documentation indicates that no hazardous materials have ever entered the system. The EBR-02 is classified as a "No Action" site in the administrative record.

B-2.1.1.2 EBR-03: EBR-1 Seepage Pit (WMO-702). This site will be retained for evaluation in the OU 10-04 RI/FS. The EBR-03 Seepage Pit (Waste Management Operations [WMO]-702) is located east of the Waste Management Office building (WMO-601) and addition (WMO-601A). The seepage pit received waste directly from the septic tank (WMO-701). The septic tank and its associated seepage pit

were used to treat sanitary waste discharges from WMO-601 and WMO-601A. The building was constructed in 1956, and it is assumed that the septic system was built at the same time. Both buildings were demolished by D&D in 1995. Initial assessment documentation indicated that no hazardous materials entered the system; however, in 1995 decontamination and dismantlement (D&D) activities discovered radionuclide-contaminated product in the associated EBR-04 septic tank.

B-2.1.1.3 EBR-04: EBR-1 Septic Tank (WMO-701). This site will be retained for evaluation in the OU 10-04 RI/FS. The EBR-04 is a septic tank (WMO-701) located east of the building (WMO-601) and addition (WMO-601A). The septic tank and its associated seepage pit were used to treat sanitary waste discharges from WMO-601 and WMO-601A. The building was constructed in 1956, and it is assumed that the septic system was built at the same time. Both buildings are now vacant.

The D&D project removed the septic tank in 1995. During removal, liquid was discovered in the tank. The D&D project sampled the tank contents and radionuclide contamination was detected.

B-2.1.1.4 EBR-05: EBR-1 Cesspool, Septic Tank (EBR-709), and Seepage Pit (EBR-713). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The EBR-05 site includes the EBR-1 Cesspool, Septic Tank (EBR-709), and Seepage Pit (EBR-713). This waste system is located west of the EBR-1 reactor building (EBR-601). The capacity for this system is approximately 1,894 L (500 gal). This waste system was used to treat sanitary waste discharged from EBR-601. The building was constructed in 1953, and it is assumed that the septic system was built at the same time. The building is presently used during the summer months as a tourist attraction. The initial assessment indicates that no hazardous or radioactive materials were ever disposed of in the septic system. The EBR-05 is classified as a “No Action” site as documented in the administrative record.

B-2.1.1.5 EBR-06: EBR-1 Septic Tank (EBR-714) and Seepage Pit (EBR-716). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The EBR-06 site consists of the EBR-1 Septic Tank (EBR-714) and Seepage Pit (EBR-716). The system is located southeast of the EBR-1 reactor building (EBR-601) and annex (EBR-601A). The capacity for the system is approximately 1,894 L (500 gal). The septic tank and associated seepage pit were used to treat sanitary waste from EBR-601 and EBR-601A. The building was constructed in 1953, and it is assumed that the septic system was built at the same time. The building is used only during the summer. There is no evidence of hazardous or radioactive materials entering the system. The EBR-06 is classified as a “No Action” site in the administrative record.

B-2.1.1.6 EBR-1 Reactor Building. The reactor building will be retained for evaluation in the OU 10-04 RI/FS as a facility assessment site. This building housed the EBR-1 reactor. The reactor has been removed, and the building is currently listed as a National Historic Landmark. The building will be scheduled for D&D once it is no longer needed. There is a possibility that the building contains hazardous materials that could be released to the environment at some point in the future.

B-2.1.2 OU 6-01

B-2.1.2.1 BORAX-02: BORAX I Burial Site. The Boiling Water Reactor Experiment (BORAX)-02 will be retained for further evaluation in the OU 10-04 RI/FS. BORAX-02 consists of the BORAX I burial ground and is located about 832 m (2,730 ft) northwest of the EBR-1 reactor building (EBR-601). The BORAX I site includes a 61 × 128-m (200 × 420-ft) surface-soil contamination area surrounding the 30 × 30-m (100 × 100-ft) fenced burial ground. The volume of buried radionuclide-contaminated soil and debris is approximately 179 m³ (6,336 ft³). The 7,804-m² (84,000-ft²)

area was covered with 15 cm (6 in.) of gravel in 1954, but grass, sagebrush, and other plants have reseeded the area since then. The BORAX-02 site was evaluated in a RI/FS for OUs 5-05 and 6-01. In December 1995, a Record of Decision (ROD), which included a selected remedy, was signed by the U.S. Department of Energy (DOE). The selected remedial action for the burial ground is containment by capping with an engineered long-term barrier comprising primarily natural materials.

The OU 5-05/6-01 RI/FS evaluated human health risks for BORAX-02 without evaluating other release sites in the BORAX facility. As a result, the cumulative risk from all of the BORAX release sites has not been evaluated. Additionally, the remedy that was selected for the site (i.e., capping) has not been completely evaluated for its protection of ecological receptors, and a small area of Cs-137 contamination located outside of the southeastern edge of the cap was identified by site surveys conducted in 1998.

BORAX-02 will be retained for evaluation in the OU 10-04 RI/FS to support a cumulative human health risk assessment for the BORAX facility, and to complete the assessment of the site's impact on ecological receptors.

If the OU 10-04 cumulative risk assessment determines that the human health risk for the BORAX facility is unacceptable, the OU 10-04 FS will evaluate remedial alternatives for the facility. This remedial alternative assessment will not consider whether the BORAX-02 cap should be modified to provide a greater level of protection for humans. The reasons for this limitation is that the human health impacts of the cap design were thoroughly evaluated in the OU 5-05/6-01 RI/FS. The OU 10-04 assessment will be limited to considering the cumulative risk produced by the BORAX facility release sites, evaluating whether other release sites at the BORAX facility should be remediated, and evaluating whether the BORAX-02 cap is protective of ecological receptors.

B-2.1.3 OU 6-02

The OU 6-02 area consists of five BORAX sites, including a leach pond previously used for wastewater disposal, a septic tank and leach pond used for sanitary wastewater disposal, a radionuclide contaminated ditch, a trash dump used for nonradioactive reactor and office waste disposal, and underground portions of two experimental reactors. Track 1 decision documents that recommend "No Further Action" have been approved for the septic tank and trash dump. The contaminated leach pond, ditch, and reactor site are included in the OU 10-06 RI/FS report (Jessmore et al. 1996). Potential contaminants are radionuclides and metals.

B-2.1.3.1 BORAX-01: BORAX II through V Leach Pond. The BORAX-01 site will be retained for further evaluation in the OU 10-04 RI/FS. The BORAX-01 is the former site of a leach pond associated with the BORAX experiment, initiated by ANL in 1953. The site is located approximately 1.2 km (0.8 mi) north of EBR-1. Experiments were conducted at the site between 1953 and 1964 to investigate the interaction among various components of the reactor/power-generation train. The BORAX leach pond (BORAX V leach pond) was constructed to receive liquid effluent generated during the reactor tests. The pond received effluent associated with BORAX III through V. No liquids were discharged to the pond from the BORAX I or II testing. A Track 1 investigation was conducted and signed in June 1994.

Radioanalytical results from a 1982 sampling effort showed the presence of Cs-137, Co-60, U-234, U-235, U-238, and Pu-239/240. A 1983 decision analysis based on the 1982 data resulted in the proposal to cover the contaminated soil in place.

The D&D occurred at the BORAX II through V site in 1984 and again in 1991 through 1992. In 1984, the leach pond area was backfilled with approximately 8,257 m³ (10,800 yd³) of clean soil, graded, and reseeded. The associated piping was not addressed in 1984, but was abandoned in place. In 1992, the associated piping was removed. Other than a small volume of contaminated soil removed from under rusted pipe sections in 1992, no contaminated soil was excavated from the leach pond area as part of the D&D operations. The pond basin was backfilled, the contaminants were confined to subsurface soils, the area was isolated, and the pond was graded and revegetated to inhibit erosion. A concrete monument was also placed at the site to deter casual or accidental human intrusion.

The Track 1 decision document (DOE-ID 1992) for the site recommended that the leach pond be addressed under the OU 10-06 RI/FS. Using historical data, the OU 10-06 remedial investigation (RI) risk evaluation concluded that the risk at the leach pond was within acceptable NCP risk-based limits. The risk from residual contamination at the site will be reevaluated in the OU 10-04 RI/FS.

B-2.1.3.2 BORAX-03: BORAX AEF Septic Tank (AEF-703). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. BORAX-03 is the location of a 2,271-L (600-gal) concrete underground septic tank (AEF-703) and its associated piping, distribution box, and leach field. The septic system was installed in 1962, and was used until 1968. The system received wastewater and sewage from a floor drain, service sink, urinal, and commode located in building AEF-605, which is a washroom separate from other BORAX buildings. AEF-703 was located 15 m (50 ft) west of building AEF-605. The building's septic tank system was removed as part of the 1996 D&D removal action, so the Track 1 recommended No Further Action for the facility.

B-2.1.3.3 BORAX-04: BORAX Trash Dump. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The BORAX-04 trash dump is located 137 m (450 ft) from the northwest corner of the BORAX V fence and is the former location of a trash dumping area used during construction, operation, and demolition of BORAX facilities prior to 1964. The BORAX-04 was the subject of a Track 1 investigation. Evidence indicates that all waste material was removed, and the area was filled in with noncontaminated soil, graded, and reseeded. The BORAX-04 is classified as a "No Action" site in the administrative record.

The site was used as early as 1953 and abandoned in 1964, when operations at the BORAX facilities ceased. The D&D occurred in 1985, and approximately 245 m³ (320 yd³) of waste was removed, 90% of which was thought to be asbestos-contaminated material. As part of the Track 1 decision document (DOE-ID 1992), a risk evaluation was performed to determine the risk-based soil concentrations for the site's contaminants. Based on 1988 sampling results, levels of barium, cadmium, and mercury were well below the risk-based concentration limits. Cyanide was slightly above the 1E-06 risk-based concentration limit, but well within the NCP target risk range. Repeated radiological surveys showed no evidence of contamination. The U.S. Environmental Protection Agency (EPA), the DOE, and the State of Idaho Department of Health and Welfare (IDHW) project managers signed the Track 1 decision document proposing that "No Further Action" should be conducted at the site because residual contaminant levels were low.

B-2.1.3.4 BORAX-08: BORAX Ditch. The BORAX-08 site will be retained for further evaluation in the OU 10-04 RI/FS. BORAX-08, otherwise known as the BORAX Ditch, was the site of a radionuclide-contaminated drainage ditch associated with the BORAX II through V reactor program initiated by ANL in 1953. The BORAX Ditch was an unlined, radiologically controlled area beginning approximately 12 m (40 ft) north of the former BORAX II through V facility. The ditch measures approximately 477 m (1,565 ft) in length and 15 m (50 ft) in width at its widest point. A 10-cm (4-in.)

raw-water line led from the reactor to a 23-cm (9-in.) corrugated underground metal pipe that emptied into the ditch just outside the north security fence of the BORAX II through V facility. When radiological surveys indicated that the ditch contained radionuclide contamination up to 1,900 cpm, presumably from BORAX II through V reactor waste stream effluent, the BORAX ditch was fenced and posted as a soil contamination area.

Contamination in the BORAX ditch was characterized during the Phase II sampling of the OU 10-06 RI/FS from April through June 1994 (Jessmore et al. 1996). Soils were sampled for radionuclides and for potential metals contamination. The OU 10-06 RI risk evaluation showed that risks and hazard quotients for the detected metals (except for arsenic) were below the NCP target risk range. The concentration term for the arsenic was only 3 mg/kg greater than background levels. Radionuclides contained in the site's soils were shown to pose a potential threat to human health and the environment.

A nontime-critical removal action (NTCRA) was conducted at the site between September 12 and October 13, 1995 (Phase III of the OU 10-06 RI/FS) to reduce risks to acceptable levels (Jessmore et al. 1996). Radionuclide-contaminated soils were excavated and transported to the Test Reactor Area (TRA) Warm Waste Pond (WWP) for interim storage pending a final decision. After excavation was complete, verification sampling and laboratory analyses were conducted to assess the residual radionuclide content. The highest level of Cs-137 observed in the post remediation verification samples collected at the site was 3.0 ± 0.2 pCi/g. This concentration was lower than the OU 10-06 preliminary remediation goal for Cs-137 (16.7 pCi/g). After the removal action, the BORAX ditch area was either backfilled or graded flat, then reseeded with native flora. A data gap has been identified for the BORAX-08 site because risk from the residual contamination at the site has not been evaluated.

B-2.1.3.5 BORAX-09: BORAX II through V Reactor Building. Existing site conditions will be evaluated during the OU 10-04 RI/FS for a final decision in the OU 10-04 ROD. BORAX-09 is the reactor building for BORAX II through V. The BORAX facility was the site of reactor experiments conducted between 1953 and 1964. A D&D removal and containment action was conducted at BORAX-09 in 1996 to remove Resource Conservation and Recovery Act (RCRA) hazardous materials and to leave the site in a safe and stable condition until a final assessment can be made in the OU 10-04 RI/FS.

The BORAX-09 comprises belowground structures remaining from AEF-601, which include subfloor concrete foundations and reactor components, and other remaining artifacts of the BORAX V facility. Concrete shield blocks seal the AEF-601 pits and trenches and a sheet-metal building covers the access shaft. The 0.4 ha (0.9 acre) area surrounding AEF-601 is fenced with chain-link and barbed wire and is posted as a radiation area to restrict entry. Underground items left at the site include two reactor vessels, a water storage pit (now dry), an equipment pit, a subreactor room, a utility pipe trench, a steam pipe trench, and a dry storage pit.

In May 1991, an analysis of subreactor room floor liquids showed 73 ± 9 pCi/L of Cs-137 contamination. Follow-up samples collected later in 1991 showed no gamma-emitting radionuclides, only gross alpha and beta activity that was below detection limits, and none of the characteristics of toxicity, ignitability, corrosivity, or reactivity. Direct radiation levels inside the reactor vessels (9.3 R/hour for the BORAX II through IV vessel and 15 R/hour for the BORAX V vessel in 1992) are dropping at approximately the rate of the half-life of Co-60, which is 5.27 years. Various facility systems contain fixed, loose, and friable asbestos-containing material. In 1992, scale on the equipment pit sump wall contained lead and cadmium (7,390 and 6,210 $\mu\text{g/L}$, respectively) presumably from lead-based paints containing cadmium pigment. Subreactor room sump samples collected in 1992 contained

300 ± 30 pCi/L of Cs-137, 84 ± 8 pCi/L of Co-60, and 479 µg/L of mercury. The mercury contamination is presumed to result from broken instruments and gauges. Additional samples collected in 1993 containing mercury did not exceed toxicity characteristic leaching procedure (TCLP) regulatory levels. In November 1994, radiation dose rates were 0.07 and 0.01 mrem/hour at 0.9 m (3 ft) above the concrete shield blocks covering the BORAX II through IV and the BORAX V reactor vessels, respectively.

The D&D activities on the remaining reactor building systems and removal of the remaining external support systems began in April 1996 and were completed in May 1997. The object of these activities was to reduce the predicted radiation exposure risk to future workers and residents to well below the NCP target range. This was accomplished by removing all remaining aboveground structures and systems and entombing the subfloor levels of the reactor building. No radiological health or safety hazards to the public or INEEL workers remain on the surface of the facility.

The lead shielding removed from the BORAX V reactor pit was sent off-Site for recycling. The mixed waste streams (cadmium-containing resin and filter) were transferred to the Waste Experimental Reduction Facility (WERF) for treatment by incineration. The Co-60 contaminated lead brick was transported to the Mixed Waste Storage Facility. Belowgrade pits and trenches were backfilled with soil, and the concrete shield blocks were replaced over these areas. The remaining reactor building systems, including two reactor vessels (BORAX II/III/IV and BORAX V) and approximately 22 m³ (780 ft³) of materials that contained asbestos, were buried in the belowgrade concrete structure.

The remaining support systems (septic system, electrical substation, raw- and waste-water lines, and miscellaneous concrete pads) external to the reactor building were dismantled and disposed either in the reactor building as fill material, at the INEEL Sanitary Landfill, or at the Property Disposal Facility. A 5-cm (2-in.) thick steel lid designed to provide shielding for the top of the reactor vessel was placed in the vessel. Thirty-three waste boxes containing the concrete cap and soil removed from the reactor pit were emptied back into the pit. The top 1.2-m (4-ft) portion of the reactor pit was filled with clean fill material and the shield blocks were replaced.

The maximum radionuclide concentrations from the reactor pit soils measured 161 pCi/g for Cs-137 and 0.82 pCi/g for Co-60; the dose at the surface is currently at background levels. A summary of the sampling analysis results indicated that levels of contact laboratory program (CLP) metals contained in the soil were at or near normal background levels for the INEEL. No TCLP metals above toxicity regulatory levels were detected. Results of the Sr-90 analysis indicated that the levels of Sr-90 contained in the soil were close to background levels. Total alpha spectrometric analyses of selected soil samples indicated that alpha-emitting radionuclides detected were consistent with expected INEEL background activities.

The reactor building foundation will continue to be covered with a herculite tarp to minimize intrusion and exposure to potential receptors until the final assessment is conducted in the OU 10-04 RI/FS. The reactor building perimeter chain-link fence was left in place. An area of about 1.2 ha (3 acres) was contoured to match the surrounding areas, then reseeded with native grasses to comply with the storm water pollution prevention plan for this site (INEL 1996).

B-2.1.4 OU 6-03

The OU 6-03 area consists of 10 out-of-service petroleum underground storage tanks (USTs) at the EBR-1 and the BORAX facilities. Track 1 decision documents that recommend “No Further Action” (DOE-ID 1992) have been approved for all the tank sites.

B-2.1.4.1 BORAX-05: Underground Storage Tanks (602-SW1 & 602-SW2). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. BORAX-05 is the former site of two USTs used to store No. 2 diesel fuel used for heating the BORAX turbine facility (AEF-602). The two tanks lay side by side approximately 6 m (20 ft) southwest of AEF-602, buried under 1.2 m (4 ft) of soil. Tank 602-SW1 (also designated as BORAX-5A) was a 1,894-L (500-gal) steel storage tank used from 1951 until 1964. Tank 602-SW2 (also designated BORAX-5B) was a 1,136-L (300-gal) steel storage tank used from 1956 until 1963. The Track 1 investigation concluded that BORAX-05 should be reclassified as a “No Action” site (DOE-ID 1992). The BORAX-05 is presently classified as a “No Further Action” site in the administrative record.

Sampling of the tank contents in 1988 determined that Tank 602-SW1 contained diesel fuel contaminated with arsenic (2 to 10 ppm); all other analytes were within acceptable levels for weathered fuel oil. Approximately 625 L (165 gal) of product were pumped out of 602-SW1 and transported to the INEEL Hazardous Waste Storage Facility at the Central Facilities Area (CFA). Tank 602-SW2 was empty and no samples were collected. Both tanks and associated piping were removed on October 9 and 10, 1990. The soil remaining at the site was sampled and no source of contamination was detected.

The Track 1 decision document recommended that the BORAX-05 should be reclassified as a “No Further Action” site (DOE-ID 1992). The decision is subject to review at the time of issuance of the ROD. No documented releases have occurred at the site. The site has neither a source of contamination nor a data gap associated with it.

B-2.1.4.2 BORAX-07: BORAX Inactive Fuel Tank by AEF-601. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. BORAX-07 was the site of a 3,786-L (1,000-gal) UST (AEF-601W). The tank stored No. 2 diesel oil used for heating the BORAX reactor building. The tank was located approximately 1.8 m (6 ft) west of the building. Records indicate that the tank was installed in 1956 and was used until 1963. The BORAX-07 is presently classified as a “No Further Action” site in the administrative record.

Liquid remaining in the tank in 1988 was sampled for waste profile analysis. The results indicated the tank contained barium (170 ppm) in the oil phase. The liquid was classified as a hazardous waste because this level exceeded the extraction procedure (EP) toxicity limit of 100 ppm. The 1,625 L (430 gal) of product pumped from the tank on July 12, 1989, was shipped to the Hazardous Waste Storage Facility at CFA. Some deterioration was observed when the tank was removed on October 1, 1990, and five biased soil samples were collected from the 3-m (10-ft) deep pit. Though photoionization detector (PID) field screening for volatile organic compounds (VOCs) showed levels from 221 to 688 ppm, exceeding the tank management program guideline of 50 ppm, excavated soil was placed back into the excavation. The site was reexcavated and sampled in 1993, and all levels had fallen to acceptable risk-based levels, probably through natural degradation and volatilization.

The Track 1 decision document for the site recommended reclassification of the BORAX-07 site as a “No Further Action” site (DOE-ID 1992). The decision is subject to review at the time of issuance of the ROD. The site has neither a source of contamination nor a data gap associated with it.

B-2.1.4.3 EBR-07: EBR-1 Underground Storage Tank (AEF-704). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. EBR-07 was the site of a 1,893-L (500 gal) steel UST (AEF-704). The tank was located at the southeast corner of building AEF-603 and stored No. 2 diesel oil used to heat AEF-603. Records indicate that the tank was installed in 1952 and last used in 1973. The tank was nearly empty, with approximately 2.5 cm (1 in.) of liquid remaining on

the bottom at the time the tank was removed in September 1990. Soil samples were screened for contaminants and found to be below guidelines for diesel fuel-contaminated soils. The excavation was backfilled with clean soil.

The Track 1 decision document for the site recommended that EBR-07 be reclassified as a “No Further Action” site. The decision is subject to review at the time of issuance of the ROD. The site has neither a source of contamination nor a data gap associated with it.

B-2.1.4.4 EBR-08: EBR-1 Underground Storage Tank (WMO-703). This site will be evaluated further for human health risk in the OU 10-04 RI/FS. EBR-08 was the site of a steel 16,086-L (4,250-gal) UST, designated WMO-703. WMO-703 was located south of the Waste Management Office building (WMO-601) and addition (WMO-601A) and contained No. 2 diesel heating fuel. Records show that the UST was installed in 1952, was last used in 1988, and never used for waste disposal.

A liquid sample collected from the tank contents for waste profile analysis showed no hazardous contaminants. Approximately 1,665 L (440 gal) of 52% diesel and 48% water were pumped from the tank on November 2, 1989. The tank, residual amounts of water and diesel, and associated piping were removed from the ground on October 1 and 2, 1990. Several holes, the largest being 15 cm (6 in.) in diameter, were observed in the tank, and approximately 38 L (10 gal) of diesel pooled into the bottom of the tank excavation. Diesel-contaminated soil (approximately 73 m³ [96 yd³]) and pooled-diesel fuel were removed from the excavation with a backhoe until bedrock was met at a depth of 5.5 m (18 ft). All the diesel-contaminated soil was removed, with the exception of two small potentially contaminated areas: (1) a sewer line in the excavation's south side prevented soil removal deeper than 1.5 m (5 ft) because of equipment limitations, and (2) a radioactively-contaminated overhead trolley located 0.6 m (2 ft) east of the excavation hindered soil removal from a small area east of the excavation.

After five biased soil samples were collected from the base of the tank excavation, the excavation was backfilled with clean soil. The samples were collected from areas in which the PID showed VOC vapor concentrations between 98.6 and 531 ppmv, which is above the tank management program (TMP) guideline of 50 ppmv. Laboratory analysis showed benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations of 0.8 to 2.0 mg/kg, 3 to 23 mg/kg, 2 to 8 mg/kg, and 17 to 72 mg/kg, respectively, in each of the soil samples. However, concentrations were equal to or less than the most restrictive exposure scenario's 1E-06 risk-based concentration. The 1E-06 risk-based concentrations were 2.0 mg/kg for benzene, 6,800 mg/kg for toluene, 3,900 mg/kg for ethylbenzene, and 78,000 mg/kg for xylenes. Total petroleum hydrocarbons (TPHs) diesel concentrations ranged from 35,000 to 52,000 mg/kg, which is above the TMP guideline of 1,000 mg/kg for TPH-diesel. No EPA-accepted toxicity information for TPH exists, but the maximum detected BTEX concentrations are below risk-based soil levels for all pathways. Diesel fuel released from EBR-08 apparently migrated approximately 6 m (20 ft) west to EBR-10, the former location of an underground 946-L (250-gal) gasoline tank.

The Track 1 decision document for the site recommended that EBR-08 be reclassified as a “No Further Action” site (DOE-ID 1992). The decision is subject to review at the time of issuance of the ROD.

B-2.1.4.5 EBR-09: Underground Storage Tank (WMO-704). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. EBR-09 was the site of a 1,894-L (500-gal) steel UST. The tank (WMO-704) was located approximately 1.2 m (4 ft) south of the northeast corner of the Waste Management Office building addition (WMO-601A), and was used to store No. 2 diesel oil for heating WMO-601. Records indicate that the tank was installed in 1952 and was used until 1986.

Waste profile analysis results from May 23, 1989, showed the contents (approximately 208 L [55 gal]) were 100% aqueous and contained 8,347 µg/kg of trichloroethane (TCA). The laboratory reported the blank contained 2,500 µg/kg, and the Generator's Hazardous Waste Profile sheet indicated the detection of TCA may have been caused by laboratory error. On September 2, 1992, when a crew arrived to pump out the contents and remove the tank, the tank was found to be dry. It is unknown if the contents had already been pumped out or had leaked. The condition of the tank is unknown because it was left in place in 1992, when excavation revealed the tank was partially underneath the footing of the Waste Management Office building (WMO-601). The tank was grouted with cement and a soil cover was placed over the excavation.

The Track 1 decision document recommended that the site be reclassified as a "No Further Action" site. The decision is subject to review at the time of issuance of the ROD.

B-2.1.4.6 EBR-10: Underground Storage Tank (WMO-705). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. EBR-10 was the site of a 946-L (250-gal) steel UST (WMO-705) used to store gasoline. The tank was located on the south side of the Waste Management Office building (WMO-601), and east of the addition to that building (WMO-601A) at the EBR-1 facility. Records indicate that the tank was installed in 1958 and last used in 1963.

A May 23, 1989, waste profile analysis indicated the 833 L (220 gal) of product (37% gasoline, 63% water) contained no hazardous constituents. On August 21, 1990, the contents were pumped from the tank and recycled. During tank excavation, a PID detected VOC soil concentrations up to 230 ppm, and all soils with readings greater than 25 ppm (TMP guideline) were segregated and disposed of at the CFA landfill. Five biased soil samples collected from the 2.9-m (9.5-ft) deep trench and analyzed for BTEX and TPH-gasoline showed ethylbenzene only in two samples (0.9 and 2 mg/kg) and xylenes in three samples (3, 3, and 10 mg/kg). Benzene, toluene, and TPH-gasoline were nondetects. Because of the presence of VOC concentrations and the absence of gasoline, the five soil samples were also analyzed for TPH-diesel. Diesel contamination was considered possible because of the proximity of another UST (WMO-703), which was approximately 6 m (20 ft) away. All five samples contained TPH-diesel, and three concentrations (9,200 mg/kg, 11,000 mg/kg, and 19,000 mg/kg) exceeded the State of Idaho guideline of 1,000 mg/kg. Following the removal of the tank, the pit was filled with clean soil. The diesel contamination is addressed in the EBR-08 (WMO-703) Track 1 decision document.

The EBR-10 Track 1 decision document recommended that the site be reclassified as a "No Further Action" site. The decision is subject to review at the time of issuance of the ROD.

B-2.1.4.7 EBR-11: Underground Storage Tank (EBR-706). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. EBR-11 was the site of a 17,033-L (4,500-gal) steel UST (EBR-706). The tank was located west of the EBR-1 reactor building (EBR-601) and annex (EBR-601A), and contained No. 2 diesel fuel used to heat EBR-601. Records indicate that the tank was installed in 1952 and remained in service until 1963.

After a waste profile analysis, performed on May 23, 1989, showed the contents of the tank to be nonhazardous petroleum (approximately 7,078 L [1,870 gal]), the contents were pumped out for recycling on August 21, 1990. The tank and associated piping were removed on September 26, 1990. During excavation, approximately 27 m³ (35 yd³) of soil with PID-detected VOC concentrations greater than 50 ppm was segregated and sent to the CFA landfill. Three biased soil samples were collected from the base of the excavation. The samples were analyzed for BTEX and TPH-diesel. The sample results

showed no BTEX contamination and a TPH-diesel concentration (350 mg/kg) in one sample that was well below the TMP guideline of 1,000 mg/kg. The excavation was filled with clean soil.

The EBR-11 Track 1 decision document recommended that the site be reclassified as a “No Further Action” site. The decision is subject to review at the time of issuance of the ROD.

B-2.1.4.8 EBR-12: Underground Storage Tank (EBR-707). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. EBR-12 was the site of a 3,786-L (1,000-gal) UST (EBR-707). The tank stored No. 2 diesel oil used for heating the EBR-1 reactor building (EBR-601) and annex (EBR-601A) and was located west of EBR-601. Records indicate that the tank was installed in 1952 and remained in service until 1963.

After a waste profile analysis, performed on May 23, 1989, showed the contents of the tank to be nonhazardous petroleum, the contents of the nearly full tank were pumped out on August 25, 1989. During excavation, approximately 25 m³ (33 yd³) of soil with PID-detected VOC concentrations greater than 50 ppm was segregated and sent to the CFA landfill. Three biased soil samples were collected from the base of the excavation. The samples were analyzed for BTEX and TPH-diesel. The sample results showed no BTEX contamination, and a TPH-diesel concentration (30 mg/kg) in one sample that was well below the TMP guideline of 1,000 mg/kg. The excavation was filled with clean soil.

The EBR-12 Track 1 decision document recommended that the site be reclassified as a “No Further Action” site. The decision is subject to review at the time of issuance of the ROD.

B-2.1.4.9 EBR-13: Underground Storage Tank (EBR-708). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. EBR-13 was the site of a 2,271-L (600-gal) steel UST (EBR-708). The tank was used to store gasoline for refueling vehicles. The tank was located on the west side of the EBR-1 reactor building (EBR-601) and annex (EBR-601A). Records indicate that the tank was installed in 1952 and remained in service until 1963.

The tank was empty on May 23, 1989, when personnel arrived to sample the contents. Therefore, no waste profile analysis is available. The tank and associated piping were removed on September 27, 1990. A PID detected VOCs in none of the excavated soil, but detected 27.8 ppm in one of the three biased soil samples collected from the trench. The BTEX and TPH-gasoline analyses showed that no gasoline contamination was present. The excavation was filled with clean soil.

The EBR-13 Track 1 decision document recommended that the site be reclassified as a “No Further Action” site. The decision is subject to review at the time of issuance of the ROD.

B-2.1.4.10 EBR-14: Underground Storage Tank (EBR-717). This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. EBR-14 was the site of a 1,893-L (500-gal) steel UST (EBR-717). The tank was used to store gasoline for refueling vehicles, and was located on the west side of the EBR-1 reactor building (EBR-601) and annex (EBR-601A). Records indicate that the tank was installed in 1952 and was last used in 1963.

Attempts to sample the tank in April 1989 were unsuccessful because a concrete pad and metal shed covered the site, and the tank could not be found. Failed attempts to locate the tank with excavations, ground-penetrating radar, metal detectors, and electromagnetic terrain conductivity surveys led to the conclusion that the tank had been removed before the placement of the concrete pad. The

highest PID VOC reading observed during the exploratory excavation (1.7 ppm) led to the conclusion that no contamination was present.

The EBR-14 Track 1 decision document recommended that the site be reclassified as a “No Further Action” site. The decision is subject to review at the time of issuance of the ROD.

B-2.1.5 OU 6-04

The OU 6-04 area consists of radionuclide-contaminated soil in the EBR-1 area.

B-2.1.5.1 EBR-15: EBR-1 Radionuclide Soil Contamination. EBR-15 will be retained for further evaluation in the OU 10-04 RI/FS. EBR-15 consisted of radionuclide-contaminated soil in the area of the National Historic Landmark known as EBR-1. The soil contamination is believed to have been caused by two spills, one in 1955 and another in 1956, of sodium-potassium (NaK) coolant containing various radionuclides, and by a NaK stabilization process used during EBR-1 D&D activities conducted in 1975. The major D&D effort involved the removal and processing of NaK coolant used in the reactor loops.

A 6 × 9-m (20 × 30-ft) concrete disposal pad, used for disposal of the NaK, retained liquids used to wash nonradioactive residual NaK from reactor components. In 1955, radioactive NaK from the disposal pad was inadvertently released into the soil surrounding the pad. No attempt was made to remove the contaminated soil at that time. During the D&D activities from 1973 to 1975, the NaK processing equipment, which was set-up on the NaK disposal pad, processed 20,818 L (5,500 gal) of radioactive NaK. Twice in 1975, radioactive NaK was released from the pad into the surrounding soil. Subsequently, the contaminated soil processing plant and the NaK disposal pad were removed and transported to the Radioactive Waste Management Complex (RWMC) for disposal.

During routine radiation surveys in 1988, Cs-137 and Sr-90 surface soil contamination was found in two areas. Area 1 was located approximately 21 m (70 ft) west of the EBR-1 reactor building (EBR-601) and annex (EBR-601A). Area 2 was located approximately 122 m (400 ft) southeast of EBR-601 and EBR-601A. In 1989, soil samples at 0.6 and 0.9 m (2 and 3 ft) below grade were collected and analyzed for radionuclides, VOCs, metals, and pH. The results indicated the presence of Cs-137 in concentrations up to 2090 ± 125 pCi/g. All VOCs detected were below the practical quantitation level, or detected in similar concentrations in the blanks. None of the detected VOC concentrations posed an unacceptable risk.

In September 1989, an attempt was made to excavate the top 7.6 cm (3 in.) of soil from Area 1. During this excavation, winds with velocities up to 32 km/hr (20 mph) began spreading the contaminated material to a larger area. The project radiological control technician halted the excavation because of the high winds. The increased area of contamination was surveyed after the project was halted and designated as Area 3. The excavated contaminated soil from Area 1 was boxed and transported to the RWMC. The excavated area was backfilled with clean soil. The boxed soil was returned from RWMC, however, because the radioactivity contained in the soil was too low to meet RWMC waste acceptance criteria. The returned soil (approximately 10 cm [4 in.]) was placed over the clean soil used to backfill the excavation at Area 1, and then was covered with more clean soil.

A radiation survey for beta-gamma radiation was conducted in the spring of 1991. Areas exceeding 100 cpm above background levels were flagged, and the area was fenced to preclude exposure to contamination. The fence enclosed all three areas previously identified.

In April 1992, a more detailed radiation survey was conducted within the fenced area to better define the extent of contamination. After the contaminated area had been delineated, a surfactant (Wen-Don) was sprayed over the soil to reduce further spread of contamination. The contaminated soil covered a combined area of about 6,132 m² (66,000 ft²) within the fenced area.

During Phase II (April through June 1994) of the OU 10-06 RI/FS, samples collected from EBR-15 showed radionuclide concentrations high enough to warrant accelerated cleanup. The OU 10-06 NTCRA (Jessmore et al. 1996) was performed between September 12 and October 13, 1995. This activity included excavation of radionuclide-contaminated soil from all detectable sources within the EBR-1 perimeter fence, using water for dust suppression. Sensitive field instruments (sodium iodide [NaI] scintillometers) were used to detect soil contaminated with Cs-137 and other gamma-emitting radionuclides, and these soils were removed. The total volume of soil excavated from EBR-15 was approximately 980 m³ (1,279 yd³). The average depth of the excavation was approximately 31.8 cm (12.5 in.), with the deepest excavations occurring in Area 2 (approximately 1.2 m [4 ft]) and Area 1 (approximately 0.9 m [3 ft]). All radionuclide-contaminated soil removed from the EBR-15 excavation was placed in covered dump trucks and delivered to the TRA WWP. Verification samples collected after the excavation was complete showed only residual Cs-137 at levels less than the Cs-137 preliminary remediation goal (PRG) of 16.7 pCi/g, except for one small area around a fence post where all contamination could not be removed. Potentially contaminated underground piping has also been discovered on the site. This piping was left in place after the NTCRA. A data gap has been identified for the site because the risk from residual contamination at the site has not been evaluated.

B-2.1.6 OU 6-05

OU 6-05 was the WAG 6 comprehensive RI/FS. Because WAGs 6 and 10 are very closely related, the WAG 6 comprehensive RI/FS is being incorporated into the OU 10-04 comprehensive RI/FS.

B-2.2 WAG 10 Sites

B-2.2.1 No Operable Unit

The release sites discussed below were not assigned to an OU in the FFA/CO (DOD-ID 1991).

B-2.2.1.1 ARVFS-01: ARVFS Containers of Contaminated NaK. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The Army Reentry Vehicle Facility Site (ARVFS) consists of an earth-covered bunker at the ARVFS that contained four vessels of contaminated NaK (682 L [180 gal] total waste volume). The vessels included two stainless steel 208-L (55-gal) drums and two carbon steel containers fabricated from pipe sections. The NaK was contaminated during a partial meltdown of the Mark-II core at the EBR-1 facility in 1955. The NaK was placed in the ARVFS bunker during D&D operations at EBR-1 in 1974. The containers of NaK were removed from the bunker and shipped to Argonne National Laboratory-West (ANL-W) for treatment on October 1, 1995. The NaK was treated in fiscal year (FY)-96, and the treatment residuals were sent to RWMC for disposal. The ARVFS bunker RCRA interim storage unit was clean closed under RCRA in FY-96 and was demolished in October 1996. The ARVFS-01 is presently classified as a "No Action" site in the administrative record.

B-2.2.1.2 ARVFS-02: ARVFS Tank Containing Low-level Radioactive Waste. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. ARVFS-02 was constructed in 1965 for secret experiments conducted by the Department of Defense (DOD). The ARVFS consisted of

an open-top cylindrical test pit (and tank), a nearby underground bunker, and a system of cables and pulleys between the bunker and test pit. The test pit was filled with water into which spent nuclear fuel elements originally used in the Materials Test Reactor (MTR) were placed. Electronic packages were suspended above the test pit and the fuel elements raised out of the water by remote means to expose the packages to a high gamma field. The bunker provided radiation shielding for personnel.

Following that series of experiments, the cables, pulleys, instrumentation, and other miscellaneous equipment were removed, and the test pit was decontaminated. The ARVFS remained inactive and empty until 1974, when four drums of radionuclide contaminated NaK from EBR-1 were stored in the bunker. In September 1989, the test pit, building, and cable trench were decontaminated and removed. The resulting hole was backfilled and graded. Direct radiation in the area was measured at or below background levels.

The initial assessment for the ARVFS-02 contaminated tank was erroneously based on the assumption that it was used to store NaK. The containers of contaminated NaK, however, were in the bunker in four separate containers. The ARVFS-02 contaminated tank was removed from the list of Consent Order and Compliance Agreement (COCA) sites (COCA 1987) because the tank was never contaminated with hazardous material. The tank was radionuclide contaminated, but has been decontaminated and removed. The ARVFS-02 is presently classified as a "No Action" site in the administrative record.

B-2.2.1.3 DF-1: Dairy Farm Disposal Pit. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The pit was used by the Navy in the 1940s to dispose of pieces of rebar. In the 1960s and '70s, the pit received solid waste generated from a dairy operated to measure effects of site operations on cattle and dairy products. These waste included debris such as manure, straw and hay, oil and gas cans, glass bottles, wood, wire, scrap metal, used pharmaceutical bottles, rebar, and syringes used on animals. An estimate contained in the initial assessment file indicates that approximately 30,000 kg (33 tons) of debris accumulated in the pit before it was removed to the CFA landfill.

In 1989, the cognizant landlord in charge of this area moved all residual items inside the pit to the CFA landfill, with the exception of five small yellowish-clear plastic bottles (each about 7.6 cm [3 in.] long by 3.8 cm [1.5 in.] wide) and one sealed clear-plastic tube (about 20.3 cm [8 in.] long), which contained a syringe wrapped in cotton and four needles. Cleanup personnel were unsure of the origin of these items and, considering the possibility the bottles might contain hazardous materials, left them undisturbed until a further analysis could be made. Analyses performed in September 1989 showed the material to be nonhazardous.

The Dairy Farm (DF)-1 waste pit received a score of zero using the EPA priority ranking system. Based on this score, sampling analysis, an industrial hygiene (IH) survey, and interviews, there is no indication of hazardous waste entering this dump site. The Dairy Farm Disposal Pit is classified as "No Action" in the administrative record.

B-2.2.1.4 EOCR-01: EOCR Leach Pond. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The Experimental Organic-Cooled Reactor (EOCR) facility was built as part of the Organic Reactor Program research. Scheduled for completion in 1963, the project was canceled in September 1962, when it was about 90% complete because a similar reactor in Canada became operational. The facility is now used intermittently as a security training facility.

The leach pond was designed to receive demineralizer regeneration wastewater from the EOCR facility, along with other waste. Construction of the facility was not completed, and the pond was never used for its designed purpose. There is no evidence of disposal of hazardous waste in the leach pond.

A summary assessment for the site was written in February 1990. The assessment, which was approved by the IDHW-Department of Environmental Quality (DEQ) and the EPA in July 1990, recommended “No Further Action” for the site.

B-2.2.1.5 EOCR-02: EOCR Injection Well. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The injection well was designed to receive wastewater and industrial waste from the EOCR facility. This facility was not completed, and the well was never used for its designed purpose. As part of a D&D effort at the EOCR facility, the injection well was plugged. There is no evidence of hazardous waste disposal in the injection well.

A summary assessment for the injection well was written in May 1987. The assessment, which was approved by IDHW-DEQ and the EPA in August 1987, recommended “No Further Action” for the site.

B-2.2.1.6 EOCR-03: EOCR Oxidation Pond. This site will be retained for further evaluation of human health risk in the OU 10-04 RI/FS. The oxidation pond was designed to receive waste from the EOCR facility. The facility was never completed, and the oxidation pond was never used for its designed purpose. Concrete piping within the pond potentially contains asbestos and lead. There is no evidence of a release of any hazardous materials at the pond. The EOCR-03 is classified as a “No Action” site in the administrative record, but the potential presence of asbestos and lead at the site warrants further investigation.

B-2.2.1.7 EOCR-04: EOCR Septic Tank. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The septic tank was built to receive sanitary waste from the EOCR facility. The facility was never completed, and the septic tank was never used for its designed purpose. There is no evidence of a release of any hazardous materials from the tank. The EOCR-04 is classified as a “No Action” site in the administrative record.

B-2.2.1.8 EOCR-05: EOCR Blowdown Sump. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The blowdown sump (EOCR-719) was designed to receive water from two boilers located in Building EOCR-601. The facility was never completed, the boilers were never operated, and the sump never received blowdown water. There is no evidence of a release of any hazardous materials to the sump. The EOCR-05 is classified as a “No Action” site in the administrative record.

B-2.2.1.9 ZPPR-01: ZPPR Disposal Pit. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The Zero Power Physics Reactor (ZPPR)-1 waste pit is located outside the ANL-W facility about 91 m (300 ft) south of the fenced boundary, opposite the ZPPR. The waste pit has been used since the late 1960s to dispose of excess fill rock, dirt and small amounts of concrete, asphalt, rebar, and wood from various projects mostly inside ANL-W. No hazardous waste has ever been dumped into this pit, and debris was surveyed for radionuclide contamination prior to disposal. The ZPPR is classified as a “No Action” site in the administrative record.

B-2.2.1.10 Security Training Facility. This facility will be addressed in the OU 10-04 RI/FS as a facility assessment site. The Security Training Facility (STF) (formerly the EOCR) building (STF-601)

is near the main INEEL entrance a half-mile east on Jefferson Boulevard. The STF-601 building has been used intermittently since 1963, (when the EOCR project was canceled) for material storage, security force practice maneuvers, and occasional destructive testing of reactor components or hazardous materials. Because the EOCR project was terminated before starting the reactor, no radionuclide contamination of parts and systems occurred. The buildings do contain asbestos that could affect human health and the environment upon demolition. In addition, the two sites listed below (STF-01 and STF-02) are new sites in the STF area that were added to OU 10-04 via the New Site Identification Form (NSIF) process.

B-2.2.2 OU 10-01

B-2.2.2.1 LCCDA-01 and LCCDA-02. The Liquid Corrosive Chemical Disposal Area (LCCDA)-01 and LCCDA-02 disposal pits will be retained for further evaluation in the OU 10-04 RI/FS. The LCCDA-01 Old Disposal Pit was an unlined pit that was used from 1960 to 1971 for disposal of corrosive liquids. Chemicals that were disposed of in the pit include KOH, NaOH, NaHCO₃, NH₄HCO₃, H₂SO₄, HNO₃, H₂PO₃, HCl, HBr, and ZnBr. These chemicals were poured into the pit and allowed to neutralize naturally, or through disposal of acids and bases together. The LCCDA-02 Limestone Treatment and Disposal Pit was used for disposal of liquid corrosives from 1971, when the LCCDA-01 pit was closed until 1980. The chemicals that were disposed of in the pit were similar to the chemicals disposed of in the LCCDA-01 pit. The LCCDA-02 pit was filled with limestone blocks to aid in the acid neutralization process. The metal truck ramp that was used during the placement of the limestone bed was buried in the pit.

Both of the LCCDA disposal pits were investigated in FY-93/94 using the Track 2 process. The pits were characterized using ground penetrating radar, seismic refraction, and electromagnetic terrain conductivity geophysical surveys. The characterization efforts were used to identify the locations of the pits for sampling purposes, determine the depth to basalt bedrock, and to detect any contaminant plumes moving laterally away from the pits in the surface sedimentary materials. Sampling revealed that no VOCs or semivolatile organic compounds (SVOCs) are present at the site. No radionuclide contamination was detected below a depth of 0.9 m (3 ft). Mass balance calculations indicate that corrosive waste has probably been neutralized, and soil pH measurements support this conclusion.

Further investigations in FY-97 included a passive soil gas survey and surface soil sampling for radionuclide analyses. The soil gas survey indicated widespread organic contamination in the RWMC/LCCDA area but did not conclusively pinpoint LCCDA as a source. The surface soil radionuclide analyses showed the presence of low-level radionuclide-contaminated soil.

B-2.2.3 OU 10-02

B-2.2.3.1 OMRE Leach Pond. The Organic Moderated Reactor Experiment (OMRE) leach pond will be retained for further evaluation. The OMRE leach pond was used for wastewater disposal from the OMRE reactor. Disposal of the wastewater occurred through evaporation and infiltration into the ground. Suspected contaminants in the pond are radionuclides, metals, and organics. The leach pond area underwent D&D in 1978.

A Track 2 investigation scheduled for the leach pond was incorporated into the OU 10-02 RI/FS and the site was sampled during the summer of 1997. Sampling included a passive soil-gas survey, and soil sampling for metals and radionuclides. The passive soil-gas indicated organic compounds (especially 1,1,1-TCA) were present in the subsurface; however, the system did not quantify the levels.

Metals concentrations in the soil appeared to be naturally occurring. Surface and subsurface radionuclide-contaminated soil was detected in elevated concentrations.

To fill the data gaps at this site per the Field Sampling Plan (FSP) in (see Appendix G of the Work Plan), borehole soil samples will be collected for organic compound analysis. In addition, stained soil present in a nearby ditch will be sampled for organic compound and polychlorinated biphenyl (PCB) content. All contamination detected during these investigations will be evaluated in the OU 10-04 RI/FS.

B-2.2.4 OU 10-03

B-2.2.4.1 Ordnance Areas. The OU 10-03 ordnance areas will be retained for further evaluation under the OU 10-04 RI/FS. The OU 10-03 consists of 25 areas containing ordnance and includes the Naval Ordnance Disposal Area (NODA). These areas are well defined throughout the INEEL, and include two bombing ranges, a site used for a mass detonation of explosives, and an area used to test large-caliber guns. The areas were surveyed during the summer and fall of 1996 in an attempt to locate unexploded ordnance. The following bullets summarize the ordnance that was located by the survey:

- Fields of trinitrotoluene (TNT)-contaminated soil at the National Oceanographic and Atmospheric Administration (NOAA) grid, the Experimental Field Station (EFS), and the Fire Station II areas
- Two live foreign bombs outside of the EFS area
- Seven live 13-cm (5-in.) projectiles found outside of the NODA
- One live 80,000-candle power flare found at the Twin Buttes Bombing Range (TBRR)
- Five to six live boosters found at the NOAA grid
- One live land mine and four to five live boosters found at the Mass Detonation Area
- Two live 13-cm (5-in.) projectiles found in the Big Lost River adjacent to the Rail Car Explosion Area
- One live 13-cm (5-in.) projectile found 15 cm (6 in.) belowgrade at the Rail Car Explosion Area
- Seven hundred fuses, eighteen 45-kg (100-lb) bombs, and several pounds of chunk cyclotrimethylene trinitroamine (RDX) and TNT found at the Rail Car Explosion Area.

B-2.2.5 OU 10-04

B-2.2.5.1 STF Sumps and Pits (STF-01). The D&D data from STF-01 will be retained for evaluation in the OU 10-04 RI/FS. In 1997, D&D discovered the flooded sumps and pits upon opening an area of the basement that had been sealed since approximately 1984. The site was subsequently approved by U.S. Department of Energy Idaho Operations Office (DOE-ID) for addition to OU 10-04 via the NSIF process. Preliminary surveys indicate that there is no radionuclide contamination. Stained water-paths from the ceiling flow over crumbling asbestos plastered walls and piping. The flooded sumps and pits appear to contain loose asbestos. It is unknown whether other contaminants are present

such as metals, radionuclides, and organic compounds. Water levels fluctuate in the sumps and pits as evident from watermarks on the walls. Sampling of the sumps and pits will be conducted during FY-98 by D&D as described in the Field Sampling Plan (Jones 1998).

B-2.2.5.2 STF Gun Range Berm (STF-02). The D&D data from STF-1 will be retained for evaluation in the OU 10-04 RI/FS. The STF area has been used since 1983 for security force practice maneuvers including small arms target practice in a berm approximately 76 m (250 ft) northeast of STF-601. The berm was used from approximately 1983 to the time of a shooting accident in 1990. Approximately 5 million rounds were fired into the berm, including tracer rounds. Gun-cleaning solvents may have been used in the area. No radionuclide contamination is anticipated. The DOE-ID approved the NSIF to add the Gun Range berm and surrounding soils in the OU 10-04 as site STF-02. Sampling of the Gun Range berm and surrounding soils will be conducted during FY-99 as described in the FSP (Jones 1998).

B-2.2.5.3 OU 10-04 Snake River Plain Aquifer. The OU 10-04 Snake River Plain Aquifer (SRPA) will be retained for evaluation in the OU 10-04 RI/FS. The SRPA is a continuous body of ground water underlying nearly all the Eastern Snake River Plain—portions of which have been affected by INEEL activities. The WAG 10 ground water assessment includes the SRPA within the INEEL boundary or beyond, if needed.

B-2.2.6 OU 10-05

B-2.2.6.1 Ordnance Site Interim Actions. All the OU 10-03 sites will be discussed further in the OU 10-04 RI/FS, and this discussion will include the results of the OU 10-05 interim actions. The OU 10-05 consists of six ordnance areas that have been selected for interim actions because of their proximity to INEEL facilities. A ROD was signed for the interim action sites in 1992. The sites covered by this OU are a subset of the ordnance sites evaluated under OU 10-03.

B-2.2.7 OU 10-06

B-2.2.7.1 Radionuclide-Contaminated Soil Sites. The OU 10-06 sample results from the BORAX windblown area and the EBR windblown area will be presented and evaluated in the OU 10-04 RI/FS. OU 10-06 comprises several areas of windblown contamination and includes several areas of nonwindblown radionuclide-contaminated soils. The sites under investigation included the Technical Support Facility (TSF) Windblown Area, Test Area North (TAN) TSF-06, TAN TSF-26, TAN TSF-29, the TRA Windblown Area, TRA North Storage Area (NSA), the Idaho Nuclear Technology and Engineering Center (INTEC) Windblown Area, the CFA Windblown Area, the Power Burst Facility (PBF) Windblown Area, the EBR-1 Windblown Area, the BORAX Windblown Area, the EBR-15 Radionuclide-Contaminated Soil Area, the BORAX Ditch, the BORAX II-V Leach Pond, the RWMC Windblown Area, the ANL-W and Transient Reactor Test Facility (TREAT) Windblown Area, and the ANL-W Soil Stockpile. An OU 10-06 NTCRA was initiated in FY-95 at seven selected sites for soil removal. These sites include TSF-06, TSF-26, TSF-29, EBR-15, the ANL-W Soil Stockpile, TRA NSA, and the BORAX Ditch. The EBR-15 Radionuclide-Contaminated Soil Area, the ANL-W Soil Stockpile, and the BORAX Ditch will be evaluated as a final action in the OU 10-04 RI/FS. The other NTCRA sites will be evaluated as a final action in the WAG-specific comprehensive RI/FSs.

B-2.2.8 OU 10-07

B-2.2.8.1 Telecommunications Cable. This site will not be evaluated further for human health risk in the OU 10-04 RI/FS. The U.S. West buried telecommunications cable was installed by AT&T in the early 1950s. The cable measures 58.7 km (36.5 mi) in length and is buried approximately 0.9 to 1.2 m (3 to 4 ft) below grade, parallel to and approximately 91 m (100 yd) east of Lincoln Boulevard at the INEEL. The cable originates at the CFA and extends along Lincoln Boulevard to the INTEC, TRA, the Naval Reactors Facility (NRF), and TAN. The cable was cut and rendered useless in the spring of 1990 when U.S. West installed a new fiber optic replacement cable. Soil samples collected in November 1990 indicated that no risk to human health or the environment was present, and the potential for release of contaminants from the cable in the future is expected to be very small. OU 10-07 is presently classified as a "No Further Action" site in the administrative record.

B-3. SUMMARY OF RETAINED SITES AND IDENTIFIED DATA GAPS

Table 1-1 (see Section 1 of the Work Plan) lists both the sites that have been retained and those that have been eliminated from further evaluation under the OU 10-04 RI/FS.

Data gaps were identified after review of the Track 1, Track 2, and other investigation documents for each OU. Data gaps were identified for the OU 10-04 RI/FS if the available documentation for a given site indicated that the site met one or more of the following criteria:

- Specific media were not evaluated in the previous investigations
- Insufficient data existed to conduct a risk evaluation
- Insufficient data existed to characterize the nature and extent of contamination
- Risk was previously unevaluated.

Detailed information on the specific data gaps identified for each site can be found in the site specific FSPs (Appendices F, G, and L) and Section 4 of the Work Plan.

B-4. REFERENCES

Becker, B. H., J. D. Burgess, K. J. Holdren, D. K. Jorgensen, S. O. Magnuson, A. J. Sondrup, 1997, *Interim Risk Assessment and Contaminant Screening for the Waste Area Group 7 Remedial Investigation*, DOE/ID-10569, Revision 1.

COCA, 1987, Resource Conservation and Recovery Act, 3008(h), *Consent Order and Compliance Agreement*.

DOE-ID, 1992, *Track 1 Investigation of BORAX-03 Septic Tank AEF-703 and Leach Field*, Document #5596.

DOE-ID, 1991, *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory*, U.S. Department of Energy, Idaho Field Office, U.S. Environmental Protection Agency, Region 10; State of Idaho, Department of Health and Welfare, 1088-06-29-120.

- Hull, L. C., et al, 1994, *Preliminary Scoping Track 2 Summary Report for the Liquid Corrosive Chemical Disposal Area, Operable Unit 10-01*, INEL-94/0075, Lockheed Martin Idaho Technologies Company, Revision 1.
- INEL 1996, *Final Report of the Decontamination and Dismantlement of the BORAX-V Facility Reactor Building*, INEL-96/0325, Lockheed Martin Idaho Technologies Company, Revision 0.
- Jessmore et al., 1996, *OU 10-06 Remedial Investigation/Feasibility Study for Operable Unit 10-06: Radionuclide-Contaminated Soils at the Idaho National Engineering Laboratory (DRAFT) Volume I and II*, Idaho National Engineering Laboratory Soils Restoration Department, Lockheed Idaho Technologies Company, Revision 1.
- Jones, R. W., 1998, *Field Sampling Plan for the Decontamination and Dismantlement of the Security Training Facility*, INEEL/EXT-97-0064, Revision 1, March.